Bicycle Crash Data Analysis - Detroit

SCOPE OF THE STUDY AND OBJECTIVES
To reduce the number and severity of bike crashes in Detroit, Michigan, a comprehensive study is needed to identify causes, contributing factors, and potential countermeasures. The objectives of this research is to determine specific causes and risk behaviors for bike crashes in Detroit, Michigan examine best practices and successful countermeasures, and provide recommendations on how to reduce bicycle crashes.

STUDY AREA

SIGNIFICANCE

TECHNICAL APPROACH

NUMBER OF BICYCLE CRASHES IN DETROIT (2010-2015) 809

BIKE CRASH STATISTICS - DETROIT TEMPORAL

BIKE CRASH STATISTICS - DETROIT SPATIAL

ROAD AND RIDER’S STATISTICS

COUNTERMEASURES

The two major risk behaviors associated with bicycle crashes in Detroit are failing to yield and overtaking (both by bicyclists and motorists). NHTSA identifies driver training and “Share the Road” awareness programs as countermeasures that work for drivers and bicyclists.

BICYCLE SAFETY RECOMMENDATION

- Always ride WITH traffic
- Wear bicycle helmets and reflective clothing
- Obey the rules of the road as other vehicle operator, such as all traffic signs, lane markings and signals, and use hand signals to indicate turns, slowing or stopping
- Stay as far to the right when riding in traffic lanes
- Avoid entering the roadway without first stopping to look for vehicles
- Have a white front headlight and a red rear reflector if riding after dark or in low light conditions.

Source: Secretary of State, MI

FUTURE RESEARCH

This observational study of Detroit bicycle crashes summarizes the characteristics of bike crashes in the city. This approach should be scaled to investigate bicycle crash characteristics for the entire state of Michigan. A statewide study would help identify critical features or countermeasures that could reduce bike crashes and promote biking as a safe mode of transportation.

REFERENCES
1. Pedestrian and Bicycle Crashes and Causes in Michigan; T.Y. Lin (2012)
3. Michigan Traffic Crash Facts (MTCF)